

Claims:

1. An oil injected screw compressor in which oil is injected into working gas to cool the working gas, the compressor comprising:

a male rotor arranged substantially in a horizontal direction;

a female rotor arranged in parallel to said male rotor;

a main body casing of the compressor having a rotor casing for containing these rotors;

an inner cylindrical wall located under said rotor casing and having a center axis substantially in a vertical direction; and

an outer wall arranged substantially in a concentric position with said inner wall,

wherein a lower casing is hermetically joined to said outer wall, so as to separate the oil from the working gas.

2. The oil injected screw compressor as claimed in claim 1, wherein said outer wall is integrated with said main body casing of the compressor.

3. An oil injected screw compressor in which oil is injected into working gas to cool the working gas, the compressor comprising:

a male rotor arranged substantially in a horizontal direction;

a female rotor arranged in parallel to said male rotor;

a main body casing of the compressor having a rotor casing for containing these rotors;

an outer cylindrical wall located under said rotor casing and having a center axis substantially in a vertical direction; and

an inner wall arranged on an inner circumferential side of said outer wall and having an outer diameter smaller than an inner diameter of said outer wall,

wherein the working gas containing the oil is guided into a clearance between said inner wall and said outer wall.

4. The oil injected screw compressor as claimed in claim 3, further comprising a lower casing joined to a flange provided on said outer wall, wherein said lower casing and said main body casing of the compressor form an oil separating mechanism of the working gas.

5. An oil injected screw compressor in which oil is injected into working gas to cool the working gas, the compressor comprising:

a male rotor arranged substantially in a horizontal direction;

a female rotor arranged in parallel to said male rotor;

a main body casing of the compressor having a rotor casing for containing these rotors;

an inner cylindrical wall located under said

rotor casing and having a center axis substantially in a vertical direction; and

an outer wall arranged substantially in a concentric position with said inner wall,

wherein a passage for guiding the working gas compressed by said male rotor and said female rotor to a passage formed between said outer wall and said inner wall is formed under a side portion of said rotor casing.

6. The oil injected screw compressor as claimed in claim 3, wherein a discharge port for guiding the working gas guided between said outer wall and said inner wall from a space inside said inner wall to outside of said main body casing of the compressor is formed in a side portion of said main body casing of the compressor.

7. The oil injected screw compressor as claimed in claim 1, further comprising a case for receiving an oil separating element that separates the oil contained in compressed gas and is shaped like a filter, wherein said case is provided on said main body casing of the compressor.

8. The oil injected screw compressor as claimed in claim 6, further comprising a manifold attached to said discharge port formed in said main body of the compressor, and a case for receiving an oil separating element that separates the oil contained in compressed gas and is shaped like a filter, wherein said case is

joined to said manifold.

9.           The oil injected screw compressor as claimed in claim 1, further comprising a D casing provided on a working gas discharge side of said rotor casing and having a discharge port, and a leg portion provided on said lower casing.